

CLAIMS

What is claimed is:

1. A method for identifying a system, comprising:
reading values of identification codes from each of a plurality of devices of the system; and
generating a system identifier value that identifies the system as a function of the read values.
2. The method of claim 1, wherein the step of reading comprises:
reading the value of a first register in each of the devices, wherein the state of each first register is a non-programmable value.
3. The method of claim 2, wherein the step of reading further comprises:
reading the value of a second register in each of the devices, wherein each second register is user-programmable.
4. The method of claim 1, wherein the step of reading comprises:
inputting a control code to each of the plurality of devices
outputting the values of the identification codes serially from at least one of the plurality of devices in response to the control code.
5. The method of claim 1, wherein the step of reading further comprises:
reading values from registers in the devices, wherein each register is user-programmable.
6. The method of claim 5, wherein at least one of the devices is a programmable logic device, the method further comprising:
storing in the register of the at least one programmable

logic device a checksum value derived from configuration data used in configuring the at least one programmable logic device.

7. The method of claim 6, wherein the generating step includes concatenating the values.

8. The method of claim 5, wherein the plurality of devices are arranged and coupled in a scan chain, and the function used in generating the system identifier value is further a function of respective positions of the plurality of devices in a scan chain.

9. The method of claim 1, wherein the generating step includes concatenating the values.

10. The method of claim 1, wherein the plurality of devices are arranged and coupled in a scan chain, and the function used in generating the system identifier value is further a function of respective positions of the plurality of devices in a scan chain.

11. The method of claim 1, wherein the step of reading comprises:

inputting a control code to each of the plurality of devices;

outputting the values of the identification codes serially from a boundary-scan register in at least one of the plurality of devices in response to the control code.

12. The method of claim 11, wherein the control code is a boundary-scan SAMPLE instruction.

13. The method of claim 11, wherein the control code is a boundary-scan EXTEST instruction.

14. The method of claim 11, wherein the boundary-scan register is one of an IDCODE register and a USERCODE register.

15. The method of claim 1, wherein the devices are programmable logic devices and the values of identification codes from each of the plurality of programmable logic devices is a configuration state of the programmable logic device.

16. The method of claim 15, wherein the generating step comprises:

- generating checksum values from each of the configuration states; and

- generating the system identifier as a function of the checksum values.

17. The method of claim 1, wherein the system includes a plurality of non-volatile memories coupled to the plurality of devices, the devices are boundary-scan accessible, and the reading step includes reading the values of the identification codes from the plurality of non-volatile memories.

18. The method of claim 1, further comprising:
storing the generated system identifier.

19. An apparatus for identifying a system, comprising:
means for reading values of identification codes from each of a plurality of devices of the system; and
means for generating a system identifier value as a function of the values of the identifications codes from the plurality of devices.

20. An arrangement for identifying a system, comprising:
a software tool hosted on a data processing arrangement;
and
a system interface coupled to the tool and to the system;
wherein the tool is configured to read values of identification codes from each of a plurality of devices of the system via the system interface and generate a system identifier value as a function of the values of the identifications codes from the plurality of devices.